REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1, 12, 23, 34, and 36-38 are pending in this application. Claims 2-11, 13-22, and 24-33 were previously canceled without prejudice or disclaimer and Claim 35 is presently canceled without prejudice or disclaimer. Claims 1, 12, 23, and 34 have been amended to emphasize that the number of discrete luminance values appearing in the histogram is to be determined. These claims are also amended to emphasize that a difference between a maximum luminance value of the discrete luminance values and a minimum luminance value of the discrete luminance values of the histogram is determined as a luminance value width and that when this luminance value width is in a predetermined range and the number of discrete luminance values appearing in the histogram is larger than a threshold, then the interpolation of pixels is done using a blend ratio of the already claimed first and second interpolation processing functions. These amendments and new Claims 36to 38 are supported by at least FIGS. 7 and 10 and their corresponding descriptions in the specification at pages 38 to 42 and at pages 47 to 48, respectively. Accordingly, no new matter has been introduced.

The outstanding Office Action presents a rejection of Claims 1, 12, 23, and 34 under 35 U.S.C. §103(a) as being unpatentable over Tanaka et al. (U.S. Patent No. 5,953,463, herein "Tanaka") in view of Sekine et al. (U.S. Patent No. 5,754,710, herein "Sekine") and Takiguchi et al. (U.S. Patent No. 6,549, 681, herein "Takiguchi") and a rejection of Claim 35 under 35 U.S.C. §103(a) as being unpatentable over Tanaka in view of Sekine and Takiguchi and merely alleged well known prior art.

Initially, it is respectfully submitted that the rejection of Claim 35 under 35 U.S.C. §103(a) as being unpatentable over Tanaka in view of Sekine and Takiguchi and merely alleged well known prior art is moot as Claim 35 has been canceled as note above.

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Independent Claim 1 requires, among other limitations, the following:

a function of histogram acquisition that acquires a histogram of a number of discrete luminance values calculated by linearly combining color component brightness values of at least each of a set of reference pixels;
a function of determining the number of discrete luminance values acquired performing the function of histogram acquisition;

a function of determining a luminance value width as a difference between a maximum luminance value of the discrete luminance values and a minimum luminance value of the discrete luminance values; and

a function of providing a blend of a first interpolation processing function that interpolates pixels to add to said image data without decreasing the degree of tone value difference between the existing pixels and a second interpolation processing function that interpolates pixels to add to said image data without affecting the gradation of the tones of the image based on a blending ratio that is determined based on the luminance value width being in a predetermined range when the number of discrete luminance values is larger than a threshold number.

Similarly, Claim 12 recites, among other things, the following:

acquiring a histogram of a number of discrete luminance values calculated by linearly combining color component brightness values of at least each of a set of reference pixels;

determining the number of discrete luminance values acquired in the step of acquiring the histogram;

determining a luminance value width as a difference between a maximum luminance value of the discrete luminance values and a minimum luminance value of the discrete luminance values; and

blending results from a first interpolation processing of interpolating pixels to add to said image data without decreasing the degree of tone value difference between the existing pixels and a second interpolation processing of interpolating pixels to add to said image data without affecting the gradation of the tones of the image based on a blending ratio that is determined based on the luminance value width being in a predetermined range when the number of discrete luminance values is larger than a threshold number.

Similar limitations have been added to Claim 23 so that, among other things, Claim

23 recites the following:

a histogram acquisition unit that acquires a histogram of a number of discrete luminance values calculated by linearly combining color component brightness values of at least each of a set of reference pixels;

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a determining unit that determines the number of discrete luminance values acquired performing the function of histogram acquisition;

a difference determining unit that determines a luminance value width as a difference between a maximum luminance value of the discrete luminance values and a minimum luminance value of the discrete luminance values; and

an interpolation blending unit that causes the first interpolation processing unit to perform said first interpolation processing and said second interpolation processing unit to perform said second interpolation processing and that blends results from the first interpolation processing and the second interpolation processing based on a blending ratio that is determined based on the luminance value width being in a predetermined range when the number of discrete luminance values is larger than a threshold number.

To whatever extent that Tanaka teaches blending interpolation results it appears to be based on a neural network determination as to the possibility of characters. Furthermore, to the extent that col. 9, line 46-col.10, line 5 of Tanaka discuss a prior art method using feature parameters that judge a block section image content based on a difference between a maximum signal level and a minimum signal level in the blocks, this and other image identification methods labeled as conventional are taught to be disadvantageous as to a resultant misjudgement as to image identification as noted at col. 10, lines 29-31. Accordingly, not only does Tanaka not teach or suggest the blending of independent Claims 1, 12, and 23 that must be based "on a blending ratio that is determined based on the luminance value width being in a predetermined range when the number of discrete luminance values is larger than a threshold number," it actually points away from considering the use of luminance value width in this determination because this luminance value width is defined to be the type of difference between a maximum luminance value and a minimum luminance value criticized as having the above-noted disadvantage. Thus, Tanaka teaches away from the use of the claimed luminance value width as being disadvantageous and suggests that the divergent path it recommends should be followed. A reference may be said to teach away when a person of ordinary skill in the art, upon reading the reference, would be

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led in a direction divergent from the path that was taken by the applicant. *See In re Gurley*,

27 F. 3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

Furthermore, Tanaka does not teach or suggest blending the results from the first

interpolation processing and the second interpolation processing ". . . when the number of

discrete luminance values is larger than a threshold number" beside the requirement as to the

"luminance value width being in a predetermined range."

None of Sekine and/or Takiguchi taken alone or together in any proper combination

cure the above noted deficiencies of Tanaka. Accordingly, as independent Claims 1, 12, and

23 all clearly patentably define over Tanaka considered alone or in any proper combination

with Sekine and/or Takiguchi and as Claim 34 depends on Claim 1, the withdrawal of the

rejection of Claims 1, 12, 23, and 34 under 35 U.S.C. §103(a) as being unpatentable over

Tanaka in view of Sekine and Takiguchi is respectfully submitted to be in order.
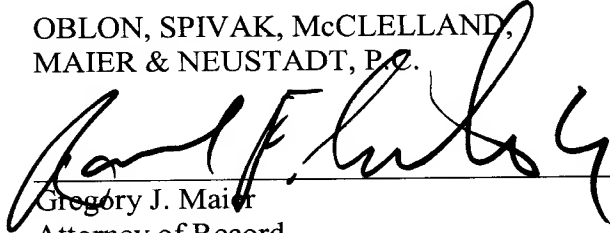
In addition, As dependent Claim 34 adds further features not taught or suggested by

Tanaka considered alone or in any proper combination with Sekine and/or Takiguchi, the

withdrawal of the rejection of Claim 34 under 35 U.S.C. §103(a) as being unpatentable over

Tanaka in view of Sekine and Takiguchi is respectfully submitted to be in order for this

reason as well.

Moreover as new Claims 36-38 are all directly or indirectly dependent on parent base

Claim 1, these new dependent Claims 36-38 are respectfully submitted to patentably define

over Tanaka considered alone or in any proper combination with Sekine and/or Takiguchi for

at least all of the reasons noted above as to parent base Claim 1, as well as because of the

limitations that they add that are also not taught or suggested by Tanaka considered alone or

in any proper combination with Sekine and/or Takiguchi.

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As no further issues are believed to remain outstanding in the present application, it is

believed that this application is clearly in condition for formal allowance and an early and

favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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